Task Force on Broadband Communications Deployment in Underserved Rural Areas

Senator E. J. Pipkin, Chairman

February 15, 2005 Progress Report

(in lieu of December 1, 2004 report)

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Task Force on Broadband Communications Deployment in **Underserved Rural Areas**

February 15, 2005 (in lieu of December 1, 2004 report)

Progress Report

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I. Purpose

The Task Force seeks to facilitate improved access to and the increased usage of high-speed communications in all underserved rural areas of the State to ensure that these regions can compete in an information-driven economy. The Task Force encourages local and State officials to see broadband deployment not as a luxury, but as a basic utility, which must be incorporated into a broad strategic vision for economic development to succeed. The Task Force issued an Interim Report on March 15, 2004 and convened meetings on June 1st and December 10th, 2004. Please see Appendix #7 to review each meeting.

II. Task Force Activities in 2004

In the course of its meetings and related activities in support of rural broadband deployment efforts in the State of Maryland, either directly or indirectly, 2004 was an active year for Task Force members. Issues addressed included:

- > Evaluating new technologies, such as Broadband over Power Lines (BPL) to assess the feasibility of these new services in improving access in rural Maryland;
- Encouraging private sector investment in rural Maryland where previous studies have demonstrated a lack of affordable and competitive access;
- > Current regulatory climate in Maryland;
- > Defining the role of existing public network assets, e.g. Network Maryland and SAILOR;
- > Homeland Security and its potential impact on rural broadband; and
- > Evaluation and review of infrastructure analysis, feasibility studies, and best practices from projects conducted in 2003-04 by private sector vendors.

III. Progress in the Field – Private Sector

The Task Force is pleased to report that much progress was made in 2004 in rural Maryland's ability to access competitively priced broadband services. This includes:

- 1) A wide expansion of DSL service available to rural businesses since our first meeting in September 2003;
- 2) Cable modem coverage has also seen significant gains, but remains a limited service to most businesses;
- 3) T1 services (a traditional high speed connection for businesses that need significant bandwidth) have become more affordable to rural businesses; and
- 4) New technologies, such as wireless, continue to drive prices down while expanding service options for businesses throughout the State.

Verizon, the State's largest provider of communication services, continues to improve its services in rural Maryland. In addition to expanding its DSL footprint in the State, Verizon has also begun a program designed for small business called "FlexGrow." This service will increase the diversity of its offerings to small business in rural Maryland by

providing a dedicated T1 pipe for both data and voice that will allow companies to enjoy business-class quality without committing to a full data T1, but as the company's needs grow or change the bandwidth allocations will adjust. However, as demonstrated at the December 10, 2004 Task Force meeting, significant challenges remain. Broadband price parity, access, and competition remain a distant goal for most rural Marylanders, but there are some indications that third party providers are seeking to fill any perceived gaps in service that still exist. A sample of these companies includes Conxx in Allegany County and Bay Broadband in Kent County.

III. Progress in the Field - Public Sector

Network Maryland continues to make significant progress in completing its robust network backbone, which will ultimately provide for at least one Point of Presence (PoP) in each county in Maryland and serve as a central artery for eGovernment services in the State of Maryland. In 2004, PoPs were established in Hagerstown, Frederick, and Cumberland.

In 2005, PoPs are to be completed for Oakland, Westminster, Leonardtown, Prince Frederick and Elkton. In addition, the wireless OC-3 network being developed on the Eastern Shore is already being implemented in Cambridge, Denton, Salisbury, Snow Hill, Princess Anne, and Centerville. When tower construction is completed, Chestertown and Easton will be the final two PoPs on the Eastern Shore.

Maryland's SAILOR network also continued its upgrades in 2004. These include: expanding Internet gateways, replacing Frame Relay with Hi-Cap T-1s, adding redundant transport between LATAs, and installing wireless backbone in rural areas.

In addition to these statewide initiatives, a number of county and regional projects were underway in rural Maryland.

- 1. Oakland, Maryland was planning to build a fiber ring around the area, with a \$1.14M grant from the U.S. Department of Agriculture, but on February 1, 2005 Allegheny Communications Connect (the primary vendor) pulled out of the project citing a shift in its business focus and reorganization within the company. Local officials are in negotiations with the USDA to develop an alternate Statement of Work
- 2. The Carroll County Department of Economic Development supported the launch of the Carroll County Technology Council, a new 501(c) 3 nonprofit dedicated to promoting, attracting, supporting and influencing technology in the County. As a result of bringing this organization together the Carroll County Community Partnership Network was formed among the primary public sector partners Carroll County Government, Carroll County Public Library, Carroll County Public Schools, and Carroll Community College. The partners signed a Memorandum of Understanding to assess the feasibility, design, development, and management of a high-speed fiber optic data communications network in Carroll County. The vision of the Community Partnership Network (CCPN) is to

bring opportunities, inherent in both the technology and resources, to Carroll County so that the Partners may better communicate with citizens, attract economic development to the region, improve the services and general quality of life, and prepare students for success. The objective of the CCPN is to enhance Carroll County's telecommunications opportunities through the implementation of innovative technologies, to eliminate duplication of effort, to reduce the overall financial expense of operation and maintenance through consolidation and economies of scale and to serve as a contact point on data communications and infrastructure for officials, managers, and technicians among the partnership. The Department of Economic Development is designing a business survey to determine the specific broadband needs of businesses located on the Maryland Rt. 97 corridor. The survey will be sent out in January, 2005. Carroll County is considering an Open RFP similar to the State of Maryland to consider private sector proposals to improve broadband service in the County.

- 3. Allegany County continues to expand its AllCoNet wireless service offerings to public, non-profit, and emergency service organizations. AllCoNet2 plans to offer services to private sector entities via an intermediary, such as Conxx, but as of this printing is not yet operational.
- 4. The Tri-County Council for Western Maryland, in conjunction with TEDCO, announced the results of its broadband access and infrastructure project (conducted by TLA Associates) in April 2004. Some of the recommendations are already being adopted locally and others have been taken under review by the Task Force. Recommendations include,
 - a. Encourage creating applications that require broadband usage, such as converged voice, data and video emergency services communications at a cost savings.
 - b. Create a Maryland broadband authority to support public and private partnerships in infrastructure development, especially to underserved areas.
 - c. Develop and support county or tri-county coordinators who understand public and private sector infrastructure and can coordinate, plan and procure funds for their growth.
 - d. Support local and state officials in their search for federal funds, including federal rebates to rural health care providers for broadband Internet usage.
 - e. Promote the economic development of Western Maryland as a strategic location for remote information technology sites and other smart growth initiatives.
 - f. Instead of working in rural "catch-up mode," aim to place the region in a leadership role. Support entrepreneurship and business development that provide broadband services and infrastructure technology commercialization. Use next generation Internet resources to create virtual incubators for broadband intensive start-ups and high growth firms.

- 5. The Tri-County Council for Southern Maryland is currently working with Maryland-based CCG Consulting to develop a regional feasibility study to address existing gaps in broadband services in the region. The project should be completed in May 2005.
- 6. The Mid-Shore Regional Council, Tri-County Council for the Lower Eastern Shore, and TEDCO announced the results of its broadband access and infrastructure project (conducted by TLA Associates) in May 2004. Some of the recommendations are already being adopted locally and others have been taken under review by the Task Force. See #4 above for a review of the recommendations. In addition, DBED, TEDCO, and the three regional councils of the Eastern Shore contracted the Yankee Group to develop a feasible business plan for developing, operating, and sustaining a broadband network on the Eastern Shore. This project has been a critical milestone in demonstrating that a broadband network could be developed on the Shore that would justify significant capital investment. Please see Appendix #4 for a full review of the Executive Summary.

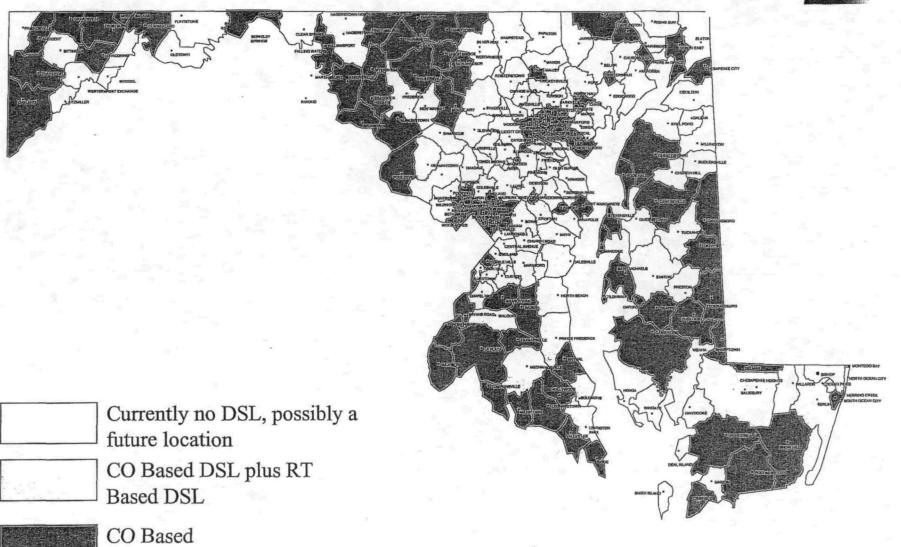
IV. Broadband Resolution

In light of the multiple efforts both private and public, and the ongoing interest in expanding broadband services on the Eastern Shore, the Task Force wrote a letter of support to Secretary DiPaula, DBM and Secretary Melissaratos, DBED endorsing the region's Eastern Shore Broadband Initiative and its inclusion in the FY 2006 budget. Please see Appendix #5 for the complete letter.

V. Appendices

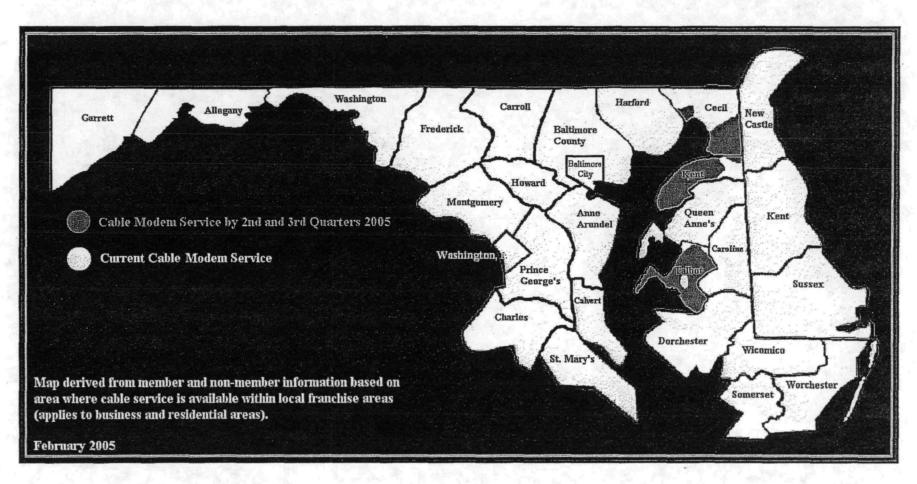
Maryland DSL Ready - October 31, 2004







MARYLAND – DELAWARE – DISTRICT OF COLUMBIA HIGH SPEED CABLE MODEM SERVICE AREA



T-1 Pricing chart for all Rural Maryland Counties (as defined by the Rural Maryland Council) and Montgomery County*
As of January 2005

Location: Address:	Cecil County 107 North Street Elkton, Maryland	Kent County 400 High Street Chestertown, Maryland 21620	Queen Anne's County 107 N. Liberty Street Centreville, Maryland 21617	Talbot County 11 North Washington Streel Easton, Maryland 21601	
Phone Number:	410-996-5203	(410) 778-7435	(410) 758-4098	(410) 770-8010	
Carrier 1 Carrier 2 Carrier 3 Carrier 4	Monthly Installation \$ 1,207 \$ - \$ 1,400 \$ 200 \$ 639 \$ - \$ 2,618 \$ 855	Monthly Installation \$ 1,434 \$ - \$ 2,300 \$ 200 \$ 639 \$ - \$ 1,786 \$ 855	Monthly Installation \$ 1,343 \$ - \$ 2,300 \$ 200 \$ 639 \$ - \$ 1,136 \$ 855	Monthly Installation \$ 1,175 \$ - \$ 1,400 \$ 200 \$ 639 \$ - \$ 753 \$ 855	
Carriers: Qwest ACC Busin MCI Sprint	Caroline County 109 Market Street Denton, Maryland 21629 (410) 479-0660	Dorchester County 501 Court Lane Cambridge, Maryland 21613 (410) 228-1700	Somerset County 11916 Somerset Avenue Princess Anne, Maryland 21853 (410) 651-0320	Wicomico County Route 50 & Division Street Salisbury, Maryland 21801 (410) 548-4801	
	Monthly Installation \$ 1,206 \$ - \$ 1,400 \$ 200 \$ 639 \$ - \$ 1,018 \$ 855	Monthly Installation \$ 1,124 \$ - \$ 1,400 \$ 200 \$ 639 \$ - \$ 1,357 \$ 855	Monthly Installation \$ 969 \$ - \$ 689 \$ 200 \$ 639 \$ - \$ 1,018 \$ 855	Monthly Installation \$ 675 \$ - \$ 689 \$ 200 \$ 639 \$ - \$ 753 \$ 855	
	Worcester County 1 West Market Street Snow Hill, Maryland 21863 (410) 632-1194	Calvert County 175 Main Street Prince Frederick, Md 20678 (410) 535-4583	Charles County 101 Centennial Street LaPlata, Md 20646 (310) 934-6500□	St. Mary's County 23115 Leonard Hall Drive Leonardtown, Md 20650 (301) 475-4200	
	Monthly Installation \$ 1,014 \$ - \$ 1,220 \$ 200 \$ 639 \$ - \$ 1,122 \$ 855	Monthly Installation \$ 2,153 \$ - \$ 2,300 \$ 200 N/A N/A \$ 1,418 \$ 855	Monthly Installation \$ 1,953 \$ - \$ 1,220 \$ 200 \$ 639 \$ - \$ 2,164 \$ 855	Monthly Installation \$ 1,456 \$ - \$ 1,400 \$ 200 \$ 639 \$ - \$ 1,931 \$ 855	

^{*}Please note that in addition to these prices, a Maryland based provider claims to have a Statewide Flat Fee Rate of not more than \$725 for a one-year contract plus taxes and a one-time set-up fee of \$599

T-1 Pricing chart for all Rural Maryland Counties (as defined by the Rural Maryland Council) and Montgomery County* As of January 2005

Washington County

Montgomery County

203 South Fourth Stree Oakland, Maryland 2155 (301) 334-8970	▼	Road yland 21502	100 W. Washin Hagerstown, Mai (240) 313	ryland 21740	101 Monroe St Rockville, Maryland 20 (240) 777-2500)850 ·
Monthly Installati	on <u>Monthly</u>	Installation	Monthly	Installation	Monthly Installa	ation
\$ 1,462 \$ -	\$ 1,153 \$	-	\$ 675 \$	-	\$ 675 \$	-
\$ 2,300 \$ 20		200	\$ 689 \$	200	\$ 689 \$	200
	'A \$ 639 \$	-	\$ 639 \$	•	\$ 639 \$	-
\$ 3,324 \$ 85	5 \$ 2,353 \$	855	\$ 753 \$	855	\$ 753 \$	855
Carroll County	Frederick C	•	Harford C	-		
225 N. Center Street Westminster, MD 2115	1800 North Mar Frederick, MD		220 South Ma Bel Air, MD			
(410)-386-2070	301-694-1		410-638-			
(410)-380-2010	301-034-1	000	410-000-			
Monthly Installation	on Monthly	Installation	Monthly	Installation		
\$ 1,000 \$ -	\$ 937 \$	-	\$ 927 \$	-		
\$ 1,400 \$ 20	D \$ 689 \$	200	\$ 689 \$	200		
\$ 639 \$ -	\$ 639 \$	-	\$ 639 \$	•		
\$ 1,627 \$ 85	5 \$ 753 \$	855	\$ 1,573 \$	855		

Note: Excludes taxes and surcharges. Customer is responsible for terminating equipment (i.e. routers). One year term.

Allegany County

Special thanks to NetGain Communications and Atlantech Online for their assistance in compiling this information.

Garrett County

^{*}Please note that in addition to these prices, a Maryland based provider claims to have a Statewide Flat Fee Rate of not more than \$725 for a one-year · contract plus taxes and a onetime set-up fee of \$599



Custom Research Summary December 31, 2004

Bringing Affordable Broadband To Maryland's Eastern Shore

The Yankee Group was retained by the Regional Councils of Maryland's East Shore to assess the feasibility of offering a publicly sponsored broadband network that would extend the availability of affordable broadband services to a wide range of business and residential users throughout the nine county area. The Councils asked the Yankee Group to conduct research and analysis to determine which technologies are best suited to offer cost-effective broadband services to increase its attractiveness and competitiveness for economic development. This report provides a summary of the key findings, conclusions and recommendations resulting from the Yankee Group's analysis of alternative methods of increasing the availability and reducing the cost of broadband services in the Eastern Shore of Maryland.

The Yankee Group has confirmed that much of the nine county region on the Eastern Shore of Maryland is currently underserved by broadband infrastructure and services, and that business customers located in this region on average pay significantly higher prices for broadband access options than their counterparts in more urban areas of Maryland. While this situation is gradually improving, this study concludes that broadband wireless is the most cost-effective technology for providing ubiquitous coverage of affordable broadband services to both business and residential customers throughout the region in the near-term.

The Yankee Group recommends that the Eastern Shore Regional Councils pursue a strategy to provide funding and support for a Regional Broadband Cooperative to build and manage an open access broadband wireless network infrastructure that would enable local wireless Internet service providers (WISPs) to offer cost-effective broadband service throughout the nine county region. This initiative will also maintain pressure on cable and DSL providers to extend affordable broadband service throughout the region. The Councils should seek the support of all nine counties, the State of Maryland and existing WISPs that would be served by the Regional Broadband Cooperative.

The financial model presented in this report indicates that a combined capital investment of \$4.3 million would cover the initial cost of a wireless broadband backbone network (\$2.6 million) and a broadband wireless access network (\$1.7 million). This network could be operational within 12-18 months and would provide extensive coverage of wireless broadband services throughout the region, generating revenues growing from \$1.7 million to \$4.8 million per year over the forecast period. In addition to the capital for the network infrastructure, the model projects additional \$2.7 million capital required to purchase the first two years of CPE and \$\$1 million for two years of operating costs (\$500,000 per year).

The financial model projects that a total of \$7 million in initial funding would be required to cover the cost of network infrastructure, CPE and operating costs the Broadband Coop would generate revenues growing from \$1.7 million to \$4.8 million per year from Wireless ISPs. The wholesale operation would begin generating positive net income once this network serves approximately 7,000 commercial and residential subscribers after 3 full years of operations at yearend 2008.

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DATE

The Honorable James C. DiPaula, Jr. Secretary, Department of Budget and Management 45 Calvert Street
Annapolis, MD 21401 - 1907

The Honorable Aris Melissaratos Secretary, Department of Business and Economic Development 217 East Redwood Street Baltimore, MD 21202 - 3316

RE: Support for DBED's FY 2006 Capital Budget Request Concerning the Eastern Shore Broadband Initiative

Dear Secretaries DiPaula and Melissaratos:

During a recent meeting of the Task Force on the Deployment of Broadband Communications in Rural Maryland (12/10/04), the Task Force unanimously approved an action to relay to you its strong endorsement of an item proposed to be included in the State's FY 2006 Capital Budget.

The Task Force, which has been hard at work since September 2003, is charged with: (1) considering developments in regions of the county where broadband communications is being deployed for rural communities; (2) evaluating the resources and infrastructure available in Maryland's rural areas; (3) encouraging the development of goals to deploy broadband communications in those areas; (4) developing proposals and recommendations for the establishment and enhancement of broadband communications in rural areas; and (5) overseeing the implementation of any recommendations. The Task Force believes that State of Maryland is now positioned to facilitate a public/private sector solution to the vexing broadband communications deployment challenge on Maryland's Eastern Shore.

For many years the Eastern Shore has been at an economic development disadvantage because of a lack of affordable, diverse and redundant high-speed Internet services. Business retention, attraction and expansion efforts throughout the region have been limited as a result. Fortunately, this situation is about to change. With timely developmental assistance provided by the Maryland Department of Business and Economic Development, the three Eastern Shore regional planning and development councils are poised to launch a much-needed and long overdue broadband communications platform to serve the nine counties of the Eastern Shore.

The Eastern Shore Broadband Initiative, with the State's support, is prepared to make available a wholesale wireless last-mile access infrastructure to enable private telecommunications and Internet service providers to offer high-speed information and communications services to business and residential customers throughout the region. Construction of the platform is slated to begin during the summer of 2005 and will be

operational within approximately 12 to 18 months. The Yankee Group, consultants on the project, report that just over \$4 million is needed to make a wireless high-speed broadband service platform ubiquitous throughout the entire Eastern Shore. Local governments in the region, as financially-strapped as most of them currently are, are in the process of raising \$1 million in matching funds to help finance this important project. The State's share of this vital economic development project is projected to be \$3 million over the next two fiscal years.

The Eastern Shore Broadband Initiative also offers Maryland an ability, not now available, to attract new businesses to the Lower Eastern Shore that desire to service NASA, NOAA, U.S. Navy, and U.S. Coast Guard installations at the Wallops Island facility. In addition, this Initiative will serve to incent completion of a redundant fiber backbone to provide alternative transmission routes around the Baltimore/Washington Corridor, thus achieving a key homeland security objective.

In closing, the Task Force believes that this Initiative provides the best opportunity to bring affordable and ubiquitous broadband service to the Eastern Shore of Maryland in a timely fashion. The Task Force also prefers private sector infrastructure deployment solutions and believes that this Initiative will enable private providers to offer a greater variety of broadband and Internet services that otherwise will not be made available in the near future. We strongly encourage that appropriate funds be included in the FY 2006 Capital Budget.

Sincerely,

E.J. Pipkin Chairman

Attendance for 2003-04 Meeting	j3					<u> </u>
Location	9:30 am - 1:30 pm, Miller Senate Office Building, Annapolis		9:30 am - 1:30 pm, Miller Senate Office Building, Annapolis	9:30 am - 1:30 pm, Miller Senate Office Building, Annapolis	9:00 am - 12:30 pm, Miller Senate Office Building, Annapolis	9:00 am - 12:00 pm, Miller Sena Office Building, Annapolis
DATE	18-Sep-03	9-Oct-03	5-Nov-03	6-Jan-04	1-Jun-04	10-Dec-0
Task Force Member & Representation	Present?	Present?	Present?	Present?	Present?	Present?
Del. John Donoghue (West)	no	no - substitute Mary Anne Kuehn	no - substitute Mary Anne Kuehn	no - substitute Mary Anne Kuehn	no - substitute Mary Anne Kuehn	no - substitute Mary Anne Kuehn
Del. Sally Jameson (South)	no	yes	yes	yes	yes	yes
Del. Mary Roe Walkup (East)	no	yes	yes	yes	no .	yes
Sen. Donald Munson (West)	yes	yes	yes	yes	yes	no
Sen. Mac Middleton (South)	no	no - substitute Donna Brown	yes	yes	no - substitute Donna Brown	no
Sen. E.J. Pipkin (East)	yes	yes	yes	yes	yes	yes
Jeff Blank, Allconet (West) David Howard, College of	no	yes	yes	no .	по	yes
Southern Maryland (South)	no	yes	yes	yes	yes	yes
Billie Dodge, Washington College (East)	no_	no	no	yes	yes	yes
Ellis Kitchen (DBM)	yes	yes	no	yes	yes	yes
Chris Foster (DBED)	yes	yes	no	no :	no	no .
Chairman Ken Schisler (PSC)	no - substitute Tracey Stokes	no - substitute Tracey Stokes	no - Jerry Hughes	no - substitute Tracey Stokes	no - substitute Tracey Stokes	no - Jerry Hughes
Renée Winsky (TEDCO)	yes	yes	yes	yes	yes	yes
Stephen McHenry (RMC)	yes	yes	no	yes	yes	yes
Frank Shap, Garrett County Economic Development (TCCWMD)	no	ves	no	yes	no	no
David Jenkins, Tri-County Council for Southern Maryland (TCCSMD)	yes - Susan Ockert	yes - Susan Ockert	yes - Susan Ockert	yes	nó	yes
John General, Chesapeake Bay Regional Technical Center for						
Excellence (MSRC) Diana Nolte, Delmarva Tech Support (TCCLES)	yes	yes yes	yes	yes	yes	yes
Carroll/Frederick Local Gov't Representative - TBD	no	no	no	no	yes - Denise Beaver	yes - Denis Beaver
John O'Neill, Director of Administration, Harford County	no - substitute Bill Wheeler		no - substitute Bill Wheeler		no - substitute Bill Wheeler	no - substitute Bill Wheeler
* = Task Force Chairman Task Force Members or						
Designated subs present	11	18	14	. 17	15	

Tuesday, June 1, 2004

Fifth Meeting of the Task Force for the Deployment of Broadband in Rural Maryland

Presidential Conference Center East Room #2 Miller Senate Office Building Annapolis, MD 21401

Meeting Agenda

9:00 AM	Welcome and Review by Task Force Chairman
9:15 AM	Homeland Security and Communications Infrastructure Dennis R. Schrader, Director, Governor's Office of Homeland Security & John Contestabile, Director Office of Engineering, Procurement and Emergency Services, Maryland Department of Transportation Q&A
10:00 AM	Break
10:10 AM	Recommendations for Improving Affordable Access in Rural Maryland: Lessons Learned from Western Maryland and the Eastern Shore Michael Beach and Charles Manto, TLA Associates
11: 55 AM	Determine Next Meeting Date
NOON	End of Meeting

December 10, 2004

Sixth Meeting of the Task Force for the Deployment of Broadband in Rural Maryland

President's Conference Center, East I Miller Senate Office Building Annapolis, MD 21401

Meeting Agenda

9:00 AM	Welcome by Senator E.J. Pipkin, Task Force Chairman
9:05 AM	Broadband over Power Lines (BPL): Understanding the Opportunities and Limitations for Rural Deployment Jeff Norman, Vice President of Business Development, Current Communications Group, LLC Q & A
9:45 AM	Updates About Relevant Projects in Rural Maryland – Private Sector
	 Verizon Maryland: Paul G. Wood, Vice President for Government Affairs Bay Broadband Communications: Tim Keefe, COO Q & A
10:20 AM	Break
10:30 AM	Updates About Relevant Projects in Rural Maryland - Public Sector
	 NetworkMaryland: Ellis Kitchen, CIO, State of Maryland SAILOR: Stuart Ragland, Project Manager Tri-County Council for Southern Maryland, David Jenkins, Executive Director AllCoNet2, Jeff Blank, Senior Network Engineer Q & A
11:20 AM	Review and Discussion of Outline for Task Force Report #3
11:50 AM	Next Steps and Meeting Date
Noon	End of Meeting